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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,887	12/29/2005	Sergei Sawitzki	NL 030780	6932

65913 7590 07/10/2008  
NXP, B.V.  
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M/S41-SJ  
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SAN JOSE, CA 95131

EXAMINER
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ELMORE, REBA I

ART UNIT	PAPER NUMBER
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2189

NOTIFICATION DATE	DELIVERY MODE
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07/10/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/562,887	<b>Applicant(s)</b> SAWITZKI ET AL.	
	<b>Examiner</b> Reba I. Elmore	<b>Art Unit</b> 2189	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. Claims 1-16 and 18-20 are presented for examination.

***SPECIFICATION***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
3. The objection to the disclosure is ***maintained*** and repeated. The recommended sections and the arrangement of the specification are helpful in providing a clearer understanding of the disclosure. By using the guidelines given below, the present invention is presented in a straight forward and recognized format which helps in reading and understanding the present invention.
4. The disclosure is objected to because of the following informalities:
  - a. the disclosure does not contain the recommended sections and arrangement of the sections as given by the MPEP. Both the recommended arrangement of the specification and the content of the sections are cited below. Appropriate correction is required.
  - b. The proper content for missing sections of the specification is given below including the content for the background, field of the invention, brief summery of the invention, a detailed description of the invention as well as the best embodiment..
5. *The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.*

***Arrangement of the Specification***

*As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:*

*(a) TITLE OF THE INVENTION.*

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*(b) CROSS-REFERENCE TO RELATED APPLICATIONS.*

*(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.*

*(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.*

*(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.*

*(f) BACKGROUND OF THE INVENTION.*

*(1) Field of the Invention.*

*(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.*

*(g) BRIEF SUMMARY OF THE INVENTION.*

*(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).*

*(i) DETAILED DESCRIPTION OF THE INVENTION.*

*(j) CLAIM OR CLAIMS (commencing on a separate sheet).*

*(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).*

*(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).*

#### ***Content of Specification***

*(a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.*

*(b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.*

*(c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.*

*(d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).*

- (e) *Incorporation-By-Reference Of Material Submitted On a Compact Disc:* *The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.*
- (f) *Background of the Invention:* *See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:*
- (1) *Field of the Invention:* *A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."*
- (2) *Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98:* *A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."*
- (g) *Brief Summary of the Invention:* *See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.*

- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

- (l) Sequence Listing, See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

6. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***CLAIM OBJECTIONS***

7. The objection to claims 1-20 as being objected to because of the following informalities: 'the global address space' lacks proper antecedent basis, is ***withdrawn*** due to the amendment.

### ***35 USC § 102***

8. The rejection of claims 1-15, 18 and 20 as being anticipated by Sevalia et al. (P/N 6,526,495) is ***maintained*** and repeated below with updates to include amendments to the claims.

9. The following is a quotation of the appropriate paragraphs of 35 USC 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

10. Claims 1-15, 18 and 20 are rejected under 35 USC 102(e) as being anticipated by Sevalia et al. (P/N 6,526,495).

11. Sevalia teaches the invention (claims 1 and 20) as claimed including a memory device and method comprising:

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providing a memory (EM) having at least two predetermined register memory sections addressable by respective address ranges (AS1 to ASz) as being able to configure the multiple queues thereby forming different predetermined memory sections as addressable ranges (e.g., see col. 2, lines 39-60);

providing at least one access port (P1 to Pz) for providing access to the memory (EM) as the queues being multi-port (e.g., see col. 2, lines 39-60);

providing access control means for addressing the memory so as to operate the register memory sections as shift registers and to map shift register accesses of the access port to predetermined addresses in the global address space of the memory as using shift registers with combinational logic and direct decode logic for control (e.g., see col. 1, lines 12-50 of P/N 5,852,748 which has been incorporated by reference); and

the control means being external to the memory and being configured to generate memory addresses for writing to and reading from the memory as the logic circuits which control the FIFOs as being either part of the storage queues or separate to the storage queues (e.g., see col. 2, lines 18-60).

As to claim 2, Sevalia teaches wherein the access control means comprises at least one address counter (e.g., see col. 1, lines 12-50 of P/N 5,852,748 which has been incorporated by reference).

As to claim 3, Sevalia teaches wherein the address ranges comprise overlapping regions of a predetermined size as being able to assign different FIFOs which can provide overlapping regions when the same FIFOs or sub-blocks are used for the ranges (e.g., see col. 2, lines 18-60).



As to claim 4, Sevalia teaches wherein at least one access port provides access to a plurality of data sources for writing data to respective register memory sections and to a plurality of data processing devices for reading data from the register memory sections (e.g., see col. 3, lines 26-53).

As to claim 5, Sevalia teaches wherein the access control means is arranged to provide alternate access for the data sources and the data processing devices as the FIFOs having individual access ports (e.g., see col. 2, lines 39-60).

As to claim 6, Sevalia teaches wherein data source accesses are controlled to cycle through the global address space and processing device accesses are controlled to cycle through the address range of a respective register memory section with the global address space being the FIFO array (e.g., see col. 2, lines 39-60).

As to claim 7, Sevalia teaches further comprising a buffer memory connectable to at least one access port and to the memory, wherein a line width of the buffer memory and the memory is selected to be greater or equal the data width of at least one access port multiplied by the sum of read accesses and write accesses per cycle (e.g., see col. 2, lines 7-60).

As to claim 8, Sevalia teaches wherein the memory is a single-port memory as using a single FIFO which can be configured (e.g., see col. 2, lines 39-60).

As to claim 9, Sevalia teaches wherein at least one access port comprises a plurality of write ports and a plurality of read ports, wherein the number of write ports differs from the number of read ports as the number of read ports being different from the number of write ports dependent upon the configuration of the FIFOs (e.g., see col. 2, lines 7-60 and Figure 8).

As to claim 10, Sevalia teaches wherein the buffer memory is arranged to buffer read and write accesses of at least one access port (e.g., see Figure 4).

As to claim 11, Sevalia teaches wherein the address control means comprises address translation means for aligning addresses relating to the read accesses in such a way that they fit to the line width as the address control logic and tag array shown in the incorporated reference (e.g., see Figure 5 and col. 4, line 44 to col. 5, line 20 of P/N 5,963,499).

As to claim 12, Sevalia teaches wherein the address translation means comprises a look-up table (LUT) as the look-up table being a tag array shown in the incorporated reference (e.g., see Figure 5 and col. 4, line 44 to col. 5, line 20 of P/N 5,963,499).

As to claim 13, Sevalia teaches wherein the access control means is adapted to transfer write accesses to the buffer memory until it is full and to write one memory line when the buffer memory is full as using full flags in relationship to the FIFOs as shown in the incorporated reference (e.g., see col. 3, line 44 to col. 4, line 26 of P/N 5,712,992).

As to claim 14, Sevalia teaches wherein the address control means is adapted to align read accesses in such a way that a block of the line width is read all the time (e.g., see col. 2, lines 39-60).

As to claim 15, Sevalia teaches wherein at least two predetermined register memory sections are operated as FIFO memory sections (e.g., see col. 2, lines 39-60).

As to claim 18, Sevalia teaches a multiplexing device for multiplexing data streams supplied from a plurality of data processing units and for generating multiplexed output data streams, the data streams being supplied to a memory device (e.g., see col. 1, lines 24-36 to col. 3, lines 10-24).

12. Claim 16 is allowable over the art of record.

13. Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***RESPONSE TO APPLICANT'S REMARKS***

14. Applicant's arguments filed April 11, 2008 have been fully considered but they are not persuasive.

15. As to the control means being external to the memory, several of the references incorporated by reference as well as the statement in the reference of the placement of the control logic teaches the control means can be external to the memory arrays or the configuration register.

***OFFICE ACTION FINALITY***

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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***CONCLUSION***

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reba I. Elmore, whose telephone number is (571) 272-4192. The examiner can normally be reached on Monday and Thursday from 7:30am to 6:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the art unit supervisor for AU 2189, Reginald G. Bragdon, can be reached for general questions concerning this application at (571) 272-4204. Additionally, the official fax phone number for the art unit is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center central telephone number is (571) 272-2100.

/Reba I. Elmore/  
Primary Patent Examiner  
Art Unit 2189

Sunday, July 06, 2008

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